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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/660,941	09/12/2003	Cary R. Bybee	200208121	7031
22879	7590	12/27/2005	EXAMINER	
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			VO, ANH T N	
			ART UNIT	PAPER NUMBER
			2861	

DATE MAILED: 12/27/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

AK

Office Action Summary	Application No. 10/660,941	Applicant(s) BYBEE ET AL.	
	Examiner Anh T.N. Vo	Art Unit 2861	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 October 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-58 is/are pending in the application.
- 4a) Of the above claim(s) 10-13 and 23-52 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9, 14-22 and 53-58 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

NON-FINAL REJECTION

The objection of the drawings is withdrawn in view of the arguments presented in the amendment.

The rejections over Iwata et al. and Burger are withdrawn in view of the amendments to the claims.

The prior art references newly found necessitated a new ground of rejection is below:

CLAIMS REJECTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 5-6 and 8-9, 14, 19-22, 53 and 58 are rejected under 35 USC 102 (b) as being anticipated Ross (US 6,431,694).

Ross discloses in Figures 1-2 and 5 an ink supply system comprising:

- a pressure tuned rolling piston (10) comprising a distal end (50, 1150) having a pressure responsive portion; and
- unmarked convolute portions coupled to said pressure responsive portion (50). Wherein a first convolute portion is configured to provide a first level of resistance against a negative pressure in the piston.

With regard to claim 1, wherein said convolute portions of the pressure tuned rolling piston comprises an elastomeric material so that they can expand or retract.

With regard to claim 5, wherein said pressure responsive portion (50) comprises a generally planar portion.

With regard to claim 6, a second convolute portion coupled to the first convolute portion provide further resistance against the negative pressure.

With regard to claims 8-9, 22 and 58, wherein an unmarked fitment is coupled to a proximal end of said piston, the proximal end opposite said distal end; and further comprises a fluid interconnect (512, see Figure 5).

With regard to claims 20-21, wherein the plurality of pressure tuned pistons are respectively provided for ink color heads (530, 534, 536, 538, see lines 20-30, column 5).

With regard to claim 53, the piston (10) inherently expands or contracts when any external force (ambient conditions) is asserted on it.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior arts are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-4 are rejected under 35 USC 103 (a) as being unpatentable over Ross (US 6,431,694) in view of Iwata et al. (US Pat. 5,608,437).

Ross discloses in Figures 1-2 and 5 an ink supply system comprising all of the limitations of the base claims as stated above but does not disclose that said elastomeric material comprises EPDM/Butyl.

Nevertheless, Itawa et al suggests in Figures 1-4 an ink container comprising a flexible member (2) which is formed with the EPDM/Butyl material for providing an excellent in gas barrier nature without adversely affecting the ink, see lines 10-45, column 6.

It would have been obvious to a person having skill in the art at the time the invention was made to employ the EPDM/Butyl material as suggested by Iwata et al in the system of Ross for the purpose of providing an excellent in gas barrier nature without adversely affecting the ink.

Claims 7, 15-18 and 54-57 are rejected under 35 USC 103 (a) as being unpatentable over Ross (US 6,431,694) in view of Scarnato (US 3,939,888) and further in view of Barinaga et al (US 6,824,139).

Ross discloses in Figures 1-2 and 5 an ink supply system comprising all of the limitations of the base claims as stated above but does not disclose that the perimeter of the second convolute portion is larger than a perimeter of the first convolute portion and the pressure responsive portion is disposed inside said first convolute portion. For example, the perimeters of all of the convolute portions of Ross are equal as shown in Figures 1 and 5.

Nevertheless, Scarnato suggests in Figure 1-3 a container (50) comprising a top convolute portion (57) having a perimeter larger the perimeter of a next convolute portion (56) for allowing the container progressively collapsed and expanded to prevent the contents from spilling out of the container, see lines 22-35, column 2.

Barinaga et al suggests in Figure 12 a diaphragm pump having a pressure portion (86B'') disposed inside the convolute (86D'') for increasing the pumping pressure and reducing size.

It would have been obvious to a person having skill in the art at the time the invention was made to make the perimeter of the second convolute portion of Ross larger than the perimeter of the first convolute portion as suggested by Scarnato and allowing the pressure

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portion of Ross disposed inside the convolute portion as suggested by Barinaga et al for the purpose of allowing the piston progressively collapsed and expanded to prevent ink from spilling out of the container, and for increasing pressure and reducing size.

With regard to claims 16 and 57, Scarnato suggests in Figure 1 the convolution portion (57, 56, 53) extending above the pressure responsive portion (51).


With regard to claim 17, since the perimeter of the second convolute portion of the modified rolling piston of Ross in view of Scarnato is larger than the perimeter of the first convolute portion; the aspect ratio of the first convolute portion would be larger than the aspect ratio of the second convolute portion.

Response to Applicant's Arguments

The applicant's arguments with respect to the prior art rejection have been carefully considered and have been traversed in view of the new grounds of rejection over Ross, Scarnato and Barinaga et al references.

CONCLUSION

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Examiner Anh Vo whose telephone number is (571) 272-2262. The examiner can normally be reached on Tuesday to Friday from 9:00 A.M. to 7:00 P.M.. The fax number of this Group 2861 is (571) 273-8300.


ANH T.N. VO
PRIMARY EXAMINER
December 22, 2005